Ethiopia Demographic and Health Survey 2005

Preliminary Report

Central Statistical Agency

MEASURE DHS
ORC Macro

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Additional information about the 2005 EDHS may be obtained from the Central Statistical Agency (CSA), P.O. Box 1143, Addis Ababa, Ethiopia; Telephone: (251-1) 11553011/111157841, Fax: (251-1) 11550334, E-mail: csa@ethionet.et. Additional information about the DHS project may be obtained from ORC Macro, 11785 Beltsville Drive, Calverton, MD 20705 USA; Telephone: 301-572-0200, Fax: 301-572-0999, E-mail: reports@orcmacro.com, Internet: http://www.measuredhs.com.

ETHIOPIA
DEMOGRAPHIC AND HEALTH SURVEY
2005

PRELIMINARY REPORT

Central Statistical Agency
Addis Ababa, Ethiopia

MEASURE DHS
ORC Macro
Calverton, Maryland, U.S.A.

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FOREWORD

The 2005 Ethiopia Demographic and Health Survey (EDHS) was conducted under the auspices of the Ministry of Health and implemented by the then Population and Housing Census Commission Office (PHCCO), now merged with the Central Statistical Agency (CSA). The first ever Demographic and Health Survey (DHS) in Ethiopia was conducted in the year 2000. The current survey is the second of its kind, conducted after the typical five-year interval. DHS surveys are being conducted throughout the developed and developing countries of the world. Ethiopia, being part of the international community, is benefiting from the experiences of other countries by conducting a DHS survey every five years to provide valuable population and health indicators for the country. The information brought through the DHS survey, in conjunction with statistical information obtained from the Welfare Monitoring Survey (WMS) and Household Income, Consumption and Expenditure Survey (HICES) will provide critical information for the designing, monitoring and evaluation of the country's Sustainable Development and Poverty Reduction Strategy Program (SDPRP), the various socioeconomic policies and programs and assist in the monitoring of the progress towards meeting the Millennium Development Goals (MDGs).

The 2005 EDHS is timely for Ethiopia, as the country moves towards achieving the MDG targets. The resources required for the survey were committed by the Government of Ethiopia, and various international donor organizations and governments, namely, the United States Agency for International Development (USAID), the Dutch and Irish Governments, and the United Nations Fund for Population Activities (UNFPA). Technical assistance was provided by ORC Macro throughout the project period.

The 2005 Ethiopia DHS survey collected information on the population and health situation, covering topics on family planning, fertility, infant and child mortality, maternal and child health, malaria, and knowledge and prevalence of HIV/AIDS. This report presents the preliminary findings from the 2005 Ethiopia DHS survey and includes information on current fertility; current use of family planning; fertility preferences; maternal care; infant and child mortality; childhood illnesses; malaria; nutrition; prevalence of female genital cutting; prevalence of obstetric fistula and knowledge of AIDS. It is expected that the findings presented in this preliminary report will provide valuable information in the formulation of appropriate population and health policies and programs in the country. The final and comprehensive report of the DHS survey, containing more detailed findings, will be published in mid-2006.

We highly appreciate and commend the dedicated effort of all institutions and persons involved in the Ethiopia 2005 DHS survey and in the timely completion of the fieldwork and publication of this report.

Samia Zekaria
A/ Director General
Central Statistical Agency

PREFACE

The 2005 Ethiopia Demographic and Health Survey (EDHS) is a nationally representative survey of more than 14,600 households. It is the second DHS survey conducted under the worldwide MEASURE DHS program, the first having been completed in 2000. The primary purpose of this survey is to measure levels, patterns, and trends in demographic and health indicators in Ethiopia.

It is with pleasure that within two months after fieldwork the PHCCO is presenting these preliminary findings of the survey. The tables and text cover selected indicators of current demand by policy makers and program administrators. A more comprehensive and detailed report will be produced by mid-2006. Thus, the results presented here should be regarded as provisional and subject to modification.

The PHCCO wishes to extend its sincere gratitude to a number of organizations and individuals who contributed to the successful completion of the 2005 EDHS. It is only through their diligence that we have been able to accomplish this survey. First and foremost, special thanks are conveyed to the donors: the Dutch and Irish Governments, and the United Nations Fund for Population Activities (UNFPA) for fully financing the local costs pertaining to the survey; the United States Government, through the United States Agency for International Development (USAID) and the President's Emergency Plan for AIDS Relief (PEPFAR), which funded the cost of technical assistance and the purchase of medical supplies and other equipment for the survey; UNICEF for supplying weighing scales and salt test kits; and, WHO/Ethiopia and the Japan International Cooperation Agency (JICA) for lending a vehicle each to support fieldwork. My cordial thanks are also extended to the Ministry of Health for their active participation throughout the survey and for the loan of four vehicles during the listing and two vehicles during the main fieldwork. My appreciation also goes to the National Office of Population (NOP) which loaned one vehicle during the listing operation. I would also like to thank the Demographic and Health Survey Program of ORC Macro in Maryland, U.S.A. for the provision of technical assistance in all aspects of the survey. Sincere thanks are also extended to all the member institutions of the EDHS Steering Committee and to development partners and stakeholders who contributed to the questionnaire contents and/or the field staff training. My special thanks go to the Ethiopia Health and Nutrition Research Institute (EHNRI), which handled the testing of the blood samples for HIV status. I also wish to acknowledge the tireless effort of the PHCCO staff who endeavored to make this survey a success. Last, but not least, my heartfelt thanks are due to field staff and to the more than 14,000 women and 6,700 men who generously offered their valuable time to enable us to gather the critical information needed.

Amare Isaias
Secretary General of the then
Population and Housing Census Commission Office (PHCCO)
And Project Director of 2005 EDHS

I. INTRODUCTION

The 2005 Ethiopia Demographic and Health Survey (2005 EDHS) was implemented by the Population and Housing Census Commission Office (PHCCO) from April 2005 to August 2005 on a nationally representative sample of more than 14,600 households. All women age 15-49 in these households and all men age 15-59 in every second household were eligible to be individually interviewed. The Ethiopia Health and Nutrition Research Institute (EHNRI) carried out the HIV testing. ORC Macro provided technical assistance throughout the survey. Funding for the survey was received from the Government of Ethiopia (GoE), the United States Government through the United States Agency for International Development (USAID) and the President's Emergency Plan for AIDS Relief (PEPFAR), the Dutch and Irish Governments, and the United Nations Population Fund (UNFPA). The United Nations Children's Fund (UNICEF) supplied weighing scales and salt test kits for use in the survey. Funds from USAID and UNFPA were also used to rent a total of 40 vehicles for use during fieldwork. In addition, WHO/Ethiopia and the Japan International Cooperation Agency (JICA) provided one vehicle each for the duration of fieldwork.

The 2005 EDHS is designed to provide data to monitor the population and health situation in Ethiopia. Specifically, the 2005 EDHS collected information on household characteristics, fertility levels and preferences, awareness and use of family planning methods, childhood mortality, maternal and child health, maternal mortality, breastfeeding practices, nutritional status of women and young children, malaria prevention and treatment, women's status, sexual activity, and awareness and behavior regarding AIDS and other sexually transmitted infections in Ethiopia. In addition, the 2005 EDHS collected information on HIV prevalence among women and men in the reproductive age group and anemia levels among women 15-49 years and children 6-59 months.

This preliminary report presents selected results of the 2005 EDHS. A comprehensive analysis of the data will be published in mid-2006. While considered provisional, the results presented here are not expected to differ significantly from those to be presented in the final report.

II. SURVEY IMPLEMENTATION

A. Sample Design

The sample was designed so as to allow separate estimates at the national level and for urban and rural areas of the country. In addition, the sample design allowed for specific indicators, such as contraceptive use, to be calculated for each of the 9 regions (Tigray, Afar, Amhara, Oromiya, Somali[1], Benishangul-Gumuz, SNNP−Southern Nations Nationalities and Peoples, Gambela and Harari), and the two city administration areas (Addis Ababa and Dire Dawa).

A representative probability sample of 14,645 households was selected for the 2005 EDHS survey. The sample was selected in two stages. In the first stage, 540 clusters were selected from a list of enumeration areas from the 1994 Population Census. In the second stage, a complete listing of households was carried out in each selected cluster. Between 27 and 32 households from each cluster were then systematically selected for participation in the survey.[2]

All women age 15-49 who were either permanent residents of the households in the 2005 EDHS sample or visitors present in the household on the night before the survey were eligible to be interviewed. In addition, in a sub-sample of half of all the households selected for the survey, all men age 15-59 were eligible to be interviewed if they were either permanent residents or visitors present in the household on the night before the survey.

B. Questionnaires

Three questionnaires were administered for the 2005 EDHS: the Household Questionnaire, the Women's Questionnaire, and the Men's Questionnaire. These questionnaires were adapted to reflect the population and health issues relevant to Ethiopia at a series of meetings with various stakeholders from government ministries and agencies, non-governmental organizations and international donors. The final draft of the questionnaires was discussed at a questionnaire design workshop organized by PHCCO in November 2004 in Addis Ababa. These questionnaires were then translated into the three main local languages−Amarigna, Oromigna and Tigrigna and pretested during January and February 2005.

The Household Questionnaire was used to list all the usual members and visitors in the selected households. Some basic information was collected on the characteristics of each person listed, including age, sex, education, and relationship to the head of the household. For children under age 18, survival status of the parents was determined. The main purpose of the Household Questionnaire was to identify women and men who were eligible for the individual interview. The Household Questionnaire also collected information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, materials used for the floor of the house, ownership of various durable goods, and ownership and use of mosquito nets. Additionally, the Household Questionnaire was used to record height, weight, and hemoglobin measurements of women age 15-49 and children age 6-59 months, and the respondents' decision as to whether to volunteer to give blood samples for HIV testing.

[1] In the Somali Region only three of the nine zones (Jijiga, Shinile and Liben) were covered. There may be some bias in the representativeness of the regional estimates for the Somali and Affar Regions, primarily because the sample excluded the nomadic population.

[2] Five clusters were not covered during fieldwork primarily due to reasons of inaccessibility. Two of these clusters were located in rural Oromiya, one in rural Somali, one in rural SNNP and one in urban Gambela.

The Women's Questionnaire was used to collect information from all women age 15-49. These women were asked questions on the following topics:

- Background characteristics (education, residential history, media exposure, etc.)
- Birth history and childhood mortality
- Knowledge and use of family planning methods
- Fertility preferences
- Antenatal and delivery care
- Breastfeeding and infant feeding practices
- Vaccinations and childhood illnesses
- Marriage and sexual activity
- Woman's work and husband's background characteristics
- Awareness and behavior regarding AIDS and other sexually transmitted infections (STIs)
- Harmful traditional practices including obstetric fistula and female genital cutting
- Maternal mortality

The Men's Questionnaire was administered to all men age 15-59 living in every second household in the 2005 EDHS sample. The Men's Questionnaire collected much of the same information found in the Women's Questionnaire, but was shorter because it did not contain a detailed reproductive history or questions on maternal and child health or nutrition.

C. Training of Field Staff

PHCCO recruited and trained 270 people for the fieldwork to serve as supervisors, field editors, male and female interviewers, field coordinators, and reserves. They all participated in the main interviewer training held in Addis Ababa from March 14 to April 20. Staff from PHCCO, EHNRI, and Macro and invited experts from government ministries led the six-week training which was conducted mainly in Amharic and included lectures, presentations, practical demonstrations, and practice interviewing in small groups, as well as several days of field practice. The participants also received anthropometric training, training in hemoglobin testing and training in the collection of dried blood spots from a finger prick for the HIV testing. In addition, 11 laboratory technicians from a local laboratory, Private Laboratory Consortium Unit (PLCU) were recruited and trained to monitor and supervise the collection of dried blood spot samples for HIV testing.

D. Fieldwork

Data collection began on April 27, 2005 by 30 data collection teams consisting of four female interviewers, two male interviewers, a supervisor, a field editor and a driver. Fieldwork was completed by the end of August 2005. Fieldwork supervision was coordinated at PHCCO headquarters; 11 regional coordinators and 11 laboratory technicians periodically visited teams to review their work and monitor data quality. Additionally, close contact between the PHCCO headquarters and the teams was maintained through field visits by senior staff, members of the steering committee and Macro staff. Regular communication was also maintained through cell phones.

E. Data Processing

The processing of the 2005 EDHS results began soon after the start of fieldwork. Completed questionnaires were returned periodically from the field to the PHCCO data processing center in Addis Ababa, where they were entered and edited by 17 data processing personnel who were specially trained for this task. In addition, blood samples received from the field were logged in, checked and transported

to EHNRI to be tested. The data processing personnel included a supervisor, a questionnaire administrator, who kept track of the questionnaires received from each cluster, administrators to receive and check the blood samples received from the field, several office editors, data entry operators, and secondary editors. The concurrent processing of the data was an advantage since field check tables were generated to monitor various data quality parameters. As a result, specific feedback was given to the teams to improve performance. The data entry and editing phase of the survey was completed in mid-September, 2005.

The processing of the blood samples for HIV testing at EHNRI was handled by 11 staff members. The dried blood spot testing protocol was validated with the assistance of Macro staff. At the laboratory, the dried blood spot samples were each given a laboratory number and kept frozen until testing was started in July. The samples were tested with two ELISA tests from different manufacturers. The first test—ELISA 1 Vironostika HIV Uniform II plus O for the detection of HIV was carried out on all the samples; all the positives and 10 percent of the negatives were then retested with ELISA 2— Enzygnost Anti-HIV 1/2 Plus. If the result of the ELISA 2 on the positive sample was positive a final result of positive was rendered and if the result of the ELISA 2 on the negative sample was negative a final result of negative was rendered. If there was a discrepancy between the results obtained in ELISA 1 and 2, the two tests were repeated. The result was rendered positive if the repeats were both positive and negative if the repeats were both negative. A confirmatory test, Western Blot, was used as a tie-breaker for those tests which showed inconsistent results on the repeat ELISAs. The final result was rendered positive if the Western Blot test confirmed the result to be positive and negative if the Western Blot test confirmed it to be negative.

The HIV test results were entered into a spreadsheet with the laboratory number and bar code. Although the plan is to eventually merge this file with the individual records, careful planning for this step will take some time. Testing of the blood samples ended in mid-October 2005.

II. PRELIMINARY FINDINGS

A. Response Rates

Table 1 shows household and individual response rates for the 2005 EDHS. A total of 14,645 households were selected for the sample, of which 13,928 were found to be occupied during data collection. Of these existing households, 13,721 were successfully interviewed, giving a household response rate of 99 percent.

In these households, 14,717 women were identified as eligible for the individual interview. Interviews were completed with 14,070 women, yielding a response rate of 96 percent. Of the 6,778 eligible men identified in the selected sub-sample of households, 89 percent were successfully interviewed. Response rates were higher in rural than urban areas, with the rural-urban difference in response rates most marked among eligible men.

Table 1. Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence, Ethiopia 2005

Result	Residence		Total
	Urban	Rural	
Household interviews			
Households selected	3,989	10,656	14,645
Households occupied	3,762	10,166	13,928
Households interviewed	3,666	10,055	13,721
Household response rate	97.4	98.9	98.5
Individual interviews: women			
Number of eligible women	4,686	10,031	14,717
Number of eligible women interviewed	4,423	9,647	14,070
Eligible woman response rate	94.4	96.2	95.6
Household interviews for men			
Households selected	1,947	5,213	7,160
Households occupied	1,828	4,959	6,787
Households interviewed	1,785	4,904	6,689
Household response rate	97.6	98.9	98.6
Individual interviews: men			
Number of eligible men	1,948	4,830	6,778
Number of eligible men interviewed	1,628	4,405	6,033
Eligible man response rate	83.6	91.2	89.0

B. Characteristics of Respondents

The distribution of women age 15-49 and men age 15-59 by background characteristics is shown in Table 2. Approximately three-fifths (59 percent) of women and half of men (52 percent) are below age 30, reflecting the young age structure of the Ethiopian population.

Table 2. Background characteristics of respondents

Percent distribution of women and men by background characteristics, Ethiopia 2005

Background characteristic	Women			Men		
	Weighted percent	Weighted number	Unweighted number	Weighted percent	Weighted number	Unweighted number
Age						
15-19	23.2	3,266	3,252	22.1	1,335	1,278
20-24	18.1	2,547	2,617	17.6	1,064	1,039
25-29	17.9	2,517	2,557	12.3	741	830
30-34	12.8	1,808	1,754	12.5	754	759
35-39	11.4	1,602	1,629	10.8	651	650
40-44	8.4	1,187	1,181	8.2	497	496
45-49	8.1	1,143	1,080	7.0	422	420
50-54	na	na	na	5.5	335	339
55-59	na	na	na	3.9	235	222
Marital status						
Never married	25.0	3,516	3,830	40.1	2,419	2,460
Married	63.4	8,914	8,438	56.2	3,393	3,295
Living together	1.1	152	206	0.5	31	37
Divorced/separated	6.9	975	1,052	2.5	153	182
Widowed	3.6	513	544	0.6	37	59
Residence						
Urban	17.8	2,499	4,423	15.2	916	1,628
Rural	82.2	11,571	9,647	84.8	5,117	4,405
Region						
Tigray	6.5	919	1,257	6.1	366	512
Affar	1.0	146	789	1.1	65	314
Amhara	24.7	3,482	1,943	25.2	1,521	897
Oromiya	35.6	5,010	2,230	36.8	2,222	1,041
Somali	3.5	486	669	3.4	202	281
Benishangul-Gumuz	0.9	124	846	0.9	54	382
SNNP	21.3	2,995	2,087	20.6	1,244	880
Gambela	0.3	44	729	0.3	21	339
Harari	0.3	39	844	0.3	16	359
Addis Ababa	5.4	756	1,869	4.8	292	698
Dire Dawa	0.5	69	807	0.5	30	330
Education						
No education	65.9	9,271	8,454	42.9	2,589	2,434
Primary	22.2	3,123	2,966	37.3	2,252	1,946
Secondary	10.5	1,481	2,292	17.3	1,045	1,394
Higher	1.4	194	358	2.4	147	259
Religion						
Orthodox	49.2	6,920	6,809	49.3	2,974	2,916
Catholic	1.2	173	143	1.0	61	56
Protestant	18.8	2,650	2,294	17.2	1,038	876
Moslem	28.5	4,009	4,521	29.6	1,788	2,030
Other	2.2	316	299	2.9	172	153
Ethnic group						
Affar	0.7	104	603	0.8	46	249
Amhara	31.5	4,434	4,165	30.8	1,861	1,707
Guragie	4.6	648	786	4.4	268	343
Oromo	32.4	4,556	3,387	33.2	2,005	1,499
Sidama	4.0	561	345	4.5	270	168
Somali	3.0	421	690	3.1	188	299
Tigraway	6.9	971	1,398	6.5	394	588
Welaita	2.6	361	266	2.2	132	103
Other	14.3	2,015	2,430	14.4	869	1,077
Total	100.0	14,070	14,070	100.0	6,033	6,033

Note: Education categories refer to the highest level of education attended, whether or not that level was completed. Primay refers to grades 1-8 and secondary refers to grades 9-12. Total includes 4 women and 2 men for whom information on religion was missing, and who are not shown separately.
na = Not applicable

Nearly two-thirds of women are currently married or living together as are more than half of men. Forty percent of men in the sample have never been married compared to 25 percent of women. This is because men tend to marry later in life than women. Women are also more than three times as likely as men to be divorced, separated or widowed.

In general, women are disadvantaged in terms of educational attainment. For example, only one in three women has attended at least primary school compared with more than one in two men.

C. Fertility

Fertility data were collected in the 2005 EDHS by asking each of the women interviewed for a history of her births. The information obtained on each of the woman's births included the month and year of the birth. These data are used to calculate two of the most widely used measures of current fertility, the total fertility rate (TFR) and its component age-specific fertility rates. The TFR, which is the sum of the age-specific fertility rates, is interpreted as the number of children the average woman would bear in her lifetime if she experienced the currently observed age-specific fertility rates throughout her reproductive years.

According to the results of the 2005 EDHS, the TFR calculated for the three years preceding the survey is 5.4 births (Table 3). Urban-rural differentials in Ethiopia are large with rural women having an average of 3.6 children more than urban women (Figure 1). The TFR from the 2005 EDHS can be compared to the TFR estimated from the 2000 EDHS. A comparison of the three-year rate shows that there is little statistical difference in the overall TFR between 2000 (5.5 births) and 2005 (5.4 births).[3] However, while there is no difference in rural fertility, urban fertility has fallen by more than half a child over the same period. Urban women and especially those age 30-39 are having fewer children now than they did five years ago.

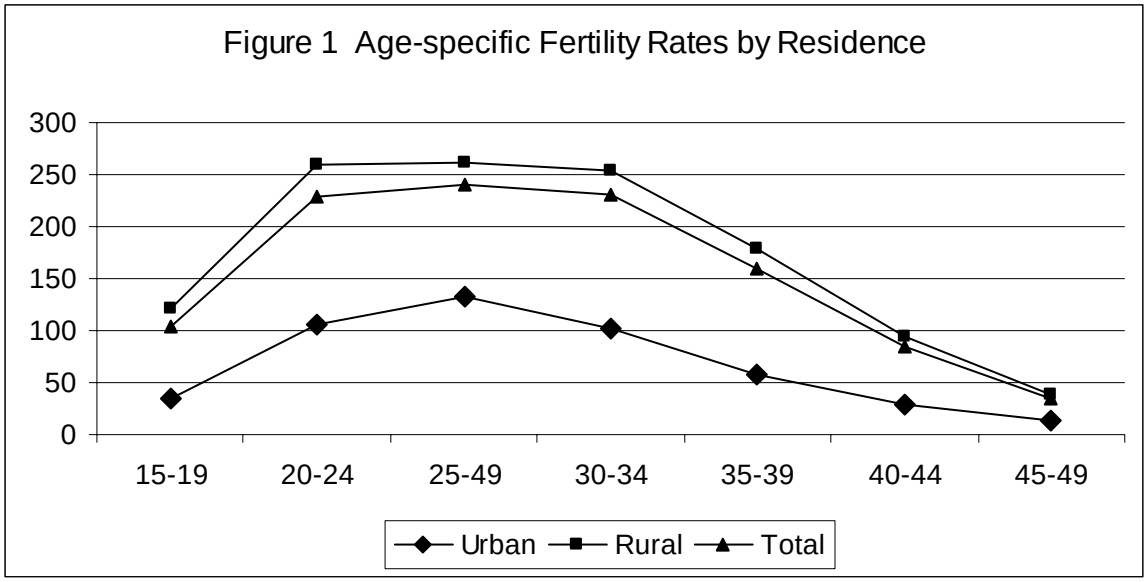
Table 3. Current fertility

Age-specific and cumulative fertility rates, the general fertility rate, and the crude birth rate for the three years preceding the survey, by residence, Ethiopia 2005

	Residence		
Age group	Urban	Rural	Total
15-19	35	122	104
20-24	105	260	228
25-29	133	261	241
30-34	101	253	231
35-39	58	178	160
40-44	28	94	84
45-49	14	38	34
TFR	2.4	6.0	5.4
GFR	77	200	179
CBR	23.4	37.3	35.7

Note: Rates for age group 45-49 may be slightly biased due to truncation.
TFR: Total fertility rate for ages 15-49, expressed per woman
GFR: General fertility rate (births divided by the number of women age 15-44), expressed per 1,000 women
CBR: Crude birth rate, expressed per 1,000 population

[3] A comparison of the five-year TFR shows a similar pattern. For the country as a whole (5.9 births in 2000 versus 5.7 births in 2005) and for rural areas (6.4 births versus 6.0 births) there has been little change over the last five years, but the urban fertility in 2005 has fallen by nearly one child since 2000 (3.3 births versus 2.4 births).



D. Family Planning

Information about knowledge and use of contraceptive methods was collected from female respondents by asking them to mention any ways or methods by which a couple can delay or avoid a pregnancy. When the respondent failed to mention a method spontaneously, the interviewer described the method and then asked if the respondent knew it. For each method known, the respondent was asked if she had ever used it. Finally, women were asked if they (or their partner) were currently using a method. For analytical purposes, contraceptive methods are grouped into two types in the table: modern and traditional. Modern methods include female sterilization, male sterilization, pill, IUD, injectables, implants, male condom, and lactational amenorrhea method (LAM). Traditional methods include periodic abstinence, withdrawal, and folk methods.

Table 4 shows key differentials in the current use of contraception by method according to selected background characteristics as reported by currently married women. Overall, the 2005 EDHS found that 15 percent of married women are using some method of contraception. The majority of users rely on a modern method. Use of modern contraceptive methods has more than doubled from 6 percent of currently married women in the 2000 EDHS to 14 percent in the 2005 EDHS. The most commonly used modern method is injectables (10 percent), followed by the pill (3 percent).

As expected, contraceptive use increases with educational attainment. Nearly half of women with at least some secondary education use a modern method, in contrast to 10 percent of women with no education. In general, women do not begin to use contraception until they have had at least one child.

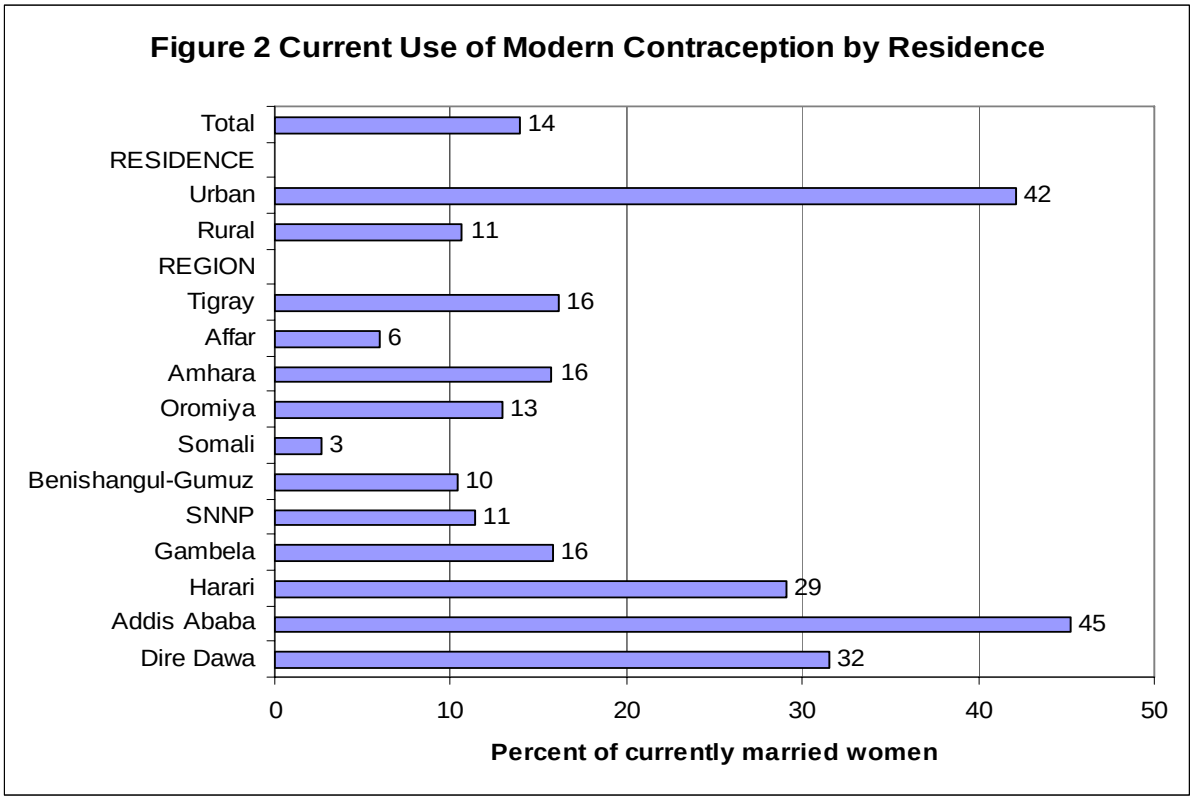
Contraceptive use also varies markedly according to geographical area (Figure 2). For example, women residing in the urban areas of Ethiopia are four times as likely as those in the rural areas to use a modern contraceptive method. This pattern is also reflected in use of contraception by regions. Use of modern contraceptive methods varies markedly from 45 percent in Addis Ababa, the most urban area in Ethiopia, to 3 percent in the Somali Region.

Table 4. Current use of contraception

Percent distribution of currently married women by contraceptive method currently used, according to background characteristics, Ethiopia 2005

Background characteristic	Any method	Any modern method	Modern method							Any tradi-tional method	Traditional method		Not currently using	Total	Number of women
			Female sterili-zation	Pill	IUD	Inject-ables	Im-plants	Male con-dom	LAM		Periodic absti-nence	With-drawal			
Age															
15-19	8.9	8.6	0.0	1.3	0.0	7.0	0.0	0.3	0.0	0.3	0.0	0.3	91.1	100.0	711
20-24	16.7	15.4	0.0	3.7	0.1	11.2	0.2	0.1	0.0	1.3	1.0	0.3	83.3	100.0	1,574
25-29	16.9	16.2	0.0	3.9	0.1	11.3	0.2	0.2	0.5	0.7	0.4	0.3	83.1	100.0	2,066
30-34	14.4	13.7	0.0	2.8	0.1	10.3	0.2	0.2	0.0	0.7	0.5	0.2	85.6	100.0	1,551
35-39	17.2	16.4	0.2	4.3	0.5	10.5	0.4	0.1	0.3	0.9	0.5	0.4	82.8	100.0	1,343
40-44	14.2	13.2	0.6	2.1	0.4	9.8	0.2	0.1	0.0	1.0	0.7	0.3	85.8	100.0	960
45-49	8.1	7.4	0.6	1.3	0.4	5.0	0.0	0.0	0.0	0.7	0.7	0.0	91.9	100.0	862
Residence															
Urban	46.7	42.2	1.3	10.7	1.8	25.9	0.7	1.4	0.4	4.5	3.7	0.8	53.3	100.0	959
Rural	10.9	10.6	0.0	2.2	0.0	8.0	0.1	0.0	0.1	0.4	0.2	0.2	89.1	100.0	8,107
Region															
Tigray	16.5	16.2	0.0	2.9	0.0	13.1	0.1	0.1	0.0	0.3	0.3	0.0	83.5	100.0	570
Affar	6.6	6.0	0.0	1.3	0.0	4.5	0.0	0.2	0.0	0.6	0.6	0.0	93.4	100.0	109
Amhara	16.1	15.7	0.1	3.6	0.2	11.6	0.1	0.1	0.0	0.4	0.3	0.1	83.9	100.0	2,330
Oromiya	13.6	12.9	0.2	3.4	0.2	8.6	0.1	0.1	0.3	0.7	0.4	0.4	86.4	100.0	3,300
Somali	3.1	2.7	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.4	0.4	0.0	96.9	100.0	363
Benishangul-Gumuz	11.1	10.4	0.3	1.3	0.0	8.5	0.0	0.1	0.0	0.7	0.6	0.1	88.9	100.0	92
SNNP	11.9	11.4	0.0	1.9	0.0	8.9	0.3	0.1	0.2	0.4	0.3	0.2	88.1	100.0	1,988
Gambela	15.9	15.8	0.0	2.5	0.0	12.9	0.0	0.5	0.0	0.1	0.1	0.0	84.1	100.0	31
Harari	33.5	29.1	0.0	5.8	1.6	20.1	0.0	0.8	0.8	4.4	4.2	0.2	66.5	100.0	22
Addis Ababa	56.9	45.2	1.8	10.6	3.9	23.5	2.0	2.1	1.3	11.7	9.2	2.5	43.1	100.0	224
Dire Dawa	34.0	31.5	0.3	6.7	0.6	21.4	1.0	1.5	0.0	2.4	2.2	0.2	66.0	100.0	37
Education															
No education	10.0	9.8	0.1	2.0	0.0	7.3	0.1	0.0	0.1	0.2	0.1	0.1	90.0	100.0	7,094
Primary	23.4	21.9	0.0	5.7	0.5	15.1	0.2	0.1	0.2	1.5	0.8	0.7	76.6	100.0	1,402
Secondary and higher	52.6	45.9	0.7	11.0	1.7	28.7	1.0	2.2	0.6	6.7	5.9	0.8	47.4	100.0	570
Living children															
0	8.8	7.6	0.0	2.6	0.0	4.1	0.0	0.8	0.0	1.2	1.2	0.0	91.2	100.0	801
1-2	16.7	15.6	0.2	3.7	0.3	11.0	0.2	0.2	0.1	1.0	0.7	0.4	83.3	100.0	2,628
3-4	14.9	14.1	0.1	3.4	0.2	10.2	0.1	0.0	0.2	0.8	0.6	0.2	85.1	100.0	2,631
5+	14.4	13.9	0.3	2.4	0.2	10.3	0.3	0.1	0.3	0.6	0.3	0.3	85.6	100.0	3,007
Total	14.7	13.9	0.2	3.1	0.2	9.9	0.2	0.2	0.2	0.8	0.6	0.3	85.3	100.0	9,066

Note: If more than one method is used, only the most effective method is considered in this tabulation.
LAM = Lactational amenorrhea method.



E. Fertility Preferences

Several questions were asked in the survey concerning a woman's fertility preferences. These questions included: a) whether the respondent wanted another child and b) if so, when she would like to have the next child. The answers to these questions allow an estimation of the potential demand for family planning services either to limit or space births.

Table 5 indicates that 78 percent of married women say that they either want to delay the birth of their next child or to have no more children (including those sterilized). Fertility preferences are closely related to the number of living children a woman has. In general, as the number of living children increases, the desire to want another child decreases. For example, 58 percent of currently married women with 5 living children say they want to have no more children or have been sterilized, in contrast to 9 percent of women with no children.

Table 5. Fertility preferences by number of living children

Percent distribution of currently married women by desire for children, according to number of living children, Ethiopia 2005

	Number of living children[1]							
Desire for children	0	1	2	3	4	5	6+	Total
Have another soon[2]	57.9	23.3	16.4	15.1	10.0	8.6	8.0	16.1
Have another later[3]	24.5	58.3	50.9	47.7	33.4	24.4	13.3	35.4
Have another, undecided when	3.0	2.5	3.5	3.7	3.3	2.7	2.4	3.0
Undecided	1.4	0.6	1.2	1.3	1.2	2.6	1.1	1.3
Want no more	8.5	14.2	26.5	31.3	49.7	57.9	72.1	41.9
Sterilized[4]	0.0	0.1	0.2	0.1	0.0	0.2	0.3	0.2
Declared infecund	4.8	0.9	1.2	0.7	2.2	3.6	2.8	2.1
Missing	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	600	1,293	1,370	1,312	1,333	1,066	2,093	9,066

[1] Includes current pregnancy
[2] Wants next birth within 2 years
[3] Wants to delay next birth for 2 or more years
[4] Includes both male and female sterilization

F. Maternal Care

Proper care during pregnancy and delivery are important for the health of both the mother and the baby. In the 2005 EDHS, women who had given birth in the five years preceding the survey were asked a number of questions about maternal health care. For the last live birth in that period, mothers were asked whether they had obtained antenatal care during the pregnancy and whether they had received tetanus toxoid injections or iron supplements during pregnancy. For each birth in the same period, the mothers were also asked what type of assistance they received at the time of delivery and where the delivery took place. Table 6 presents the information on these key maternal care indicators.

Antenatal Care

Antenatal care from a trained provider is important in order to monitor the pregnancy and reduce the risks for the mother and child during pregnancy and at delivery. According to the 2005 EDHS results, 28 percent of women who gave birth in the 5 years preceding the survey received antenatal care from a health professional at least once. Nearly nine in ten women in Addis Ababa and one in two women living in Dire Dawa received antenatal care at least once during their pregnancy. In contrast, less than one in ten women in the Somali Region and 15 percent of women in the Affar Region received antenatal care from a health professional. Antenatal care from a health professional ranged from 25 percent to 41 percent in the other regions of Ethiopia.

Tetanus Toxoid and Iron Supplements

Tetanus toxoid injections are given during pregnancy to prevent neonatal tetanus, an important cause of infant deaths. Mothers are also given iron supplements during pregnancy since maternal anemia is another frequent cause of both maternal and neonatal mortality.

Table 6. Maternal care indicators

Percentage of women who had a live birth in the five years preceding the survey who received specific maternal health services during pregnancy for the most recent birth, and among all live births in the five years before the survey, percentage delivered by a health professional and percentage delivered in a health facility, by background characteristics, Ethiopia 2005

Background characteristic	Percentage with antenatal care from a health profes-sional	Percentage given at least one tetanus toxoid injection	Percentage given iron tablets during pregnancy	Number of women	Percentage delivered by a health profes-sional	Percentage delivered in a health facility	Number of births
Mother's age at birth							
<20	27.3	37.7	9.7	994	6.9	6.3	1,715
20-34	29.1	38.8	10.6	4,923	5.8	5.5	7,702
35+	22.7	30.5	10.4	1,391	3.8	3.5	1,746
Birth order							
1	34.4	42.7	9.8	1,190	13.7	13.1	1,933
2-3	31.1	41.5	10.6	2,089	6.6	5.8	3,351
4-5	25.8	35.5	9.6	1,692	2.7	2.6	2,620
6+	22.4	31.5	11.3	2,336	2.4	2.2	3,259
Residence							
Urban	68.9	66.1	20.1	634	44.6	42.4	815
Rural	23.7	34.3	9.5	6,674	2.6	2.4	10,348
Region							
Tigray	35.3	39.2	12.2	480	6.0	6.1	698
Affar	15.0	16.4	9.4	68	4.5	3.9	107
Amhara	26.5	36.0	8.4	1,856	3.7	3.5	2,621
Oromiya	24.8	35.5	10.3	2,723	4.8	4.2	4,411
Somali	7.4	10.6	8.3	288	5.2	5.0	477
Benishangul-Gumuz	24.5	25.4	7.5	69	5.1	4.7	105
SNNP	30.3	43.1	12.0	1,632	4.2	3.7	2,500
Gambela	36.6	30.2	17.0	23	15.3	15.2	31
Harari	40.7	40.9	20.1	15	31.4	31.6	22
Addis Ababa	88.3	77.4	20.3	129	78.8	78.5	153
Dire Dawa	52.9	55.3	12.5	25	26.7	25.8	37
Education							
No education	21.7	31.9	9.4	5,734	2.3	2.2	8,838
Primary	39.4	49.9	11.6	1,205	8.5	8.0	1,855
Secondary and higher	80.9	76.2	22.8	368	57.7	51.6	470
Total	27.6	37.1	10.4	7,307	5.7	5.3	11,163

Table 6 indicates that 37 percent of all pregnant women received at least one tetanus toxoid injection and 10 percent were given iron supplementation during pregnancy. Once again regional differences are marked. The likelihood of receiving a tetanus toxoid injection increases with educational attainment, from 32 percent among women with no education to 76 percent among mothers with at least some secondary education.

Delivery Care

Proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that can cause the death or serious illness of the mother and/or the baby. Although 28 percent of mothers received antenatal care from a health professional for their most recent birth, only 6 percent of babies are delivered by a health professional and 5 percent at a health facility.

Women's utilization of delivery services increases significantly with education. For example, 2 percent of women with no education were attended during delivery by a health professional compared to 58 percent of women with some secondary or higher education. A baby's likelihood of professional delivery care decreases as the age of the mother and the birth order increases.

There is considerable variation by residence. Two in five urban births have had a health professional in attendance during delivery compared with about 3 percent of rural births. In Addis Ababa, more than three in four babies are delivered a health facility. In contrast, with the exception of women living in Harari, Dire Dawa and Gambela only about 5 percent of babies in the other regions are delivered in a health facility.

G. Child Health

The 2005 EDHS obtained information on a number of key child health indicators, including childhood mortality rates, immunization of young children, and treatment practices when a child is ill.

Levels of Childhood Mortality

An important objective of the 2005 EDHS was to measure the level and trend of mortality among children, since infant and child mortality rates are basic indicators of a country's socioeconomic situation and quality of life. Estimates of childhood mortality are based on information from the birth history section of the questionnaire administered to individual women. The section includes questions about the aggregate childbearing experience of respondents For each birth, detailed information was then collected on sex, month and year of birth, survivorship status and current age, or, if the child had died, age at death. This information is used to directly estimate the five mortality rates presented in Table 7. All rates are expressed per 1,000 live births except for child mortality, which is expressed per 1,000 children surviving to 12 months of age.

Table 7 shows infant and child mortality estimates based on data from the 2005 EDHS. For the five years immediately preceding the survey (approximately calendar years 2001-2005), the infant mortality rate is 77 per 1,000 live births. The estimate of child mortality (age 1 to age 4) is lower. The overall under-five mortality rate for the period is 123 per 1,000.

Internal data from the 2005 EDHS data indicate a decline in childhood mortality. Infant mortality estimates show a decline from 95 in the 10-14 years preceding the survey to 83 in the 5-9 year period preceding the survey and to 77 during the most recent five-year period.

A comparison of mortality estimates obtained from the 2005 EDHS with estimates from the 2000 EDHS data for the same period show notable differences. For example, under-five mortality for the 5-9 years preceding the 2005 survey is 141 per thousand live births but 166 in 2000 for the same period, that is, for the 0-4 years preceding the 2000 survey. Similar differences are noticed for all five mortality indicators with the 2000 survey data showing higher incidence of mortality than the 2005 rates for the same period.

Table 7. Early childhood mortality rates

Neonatal, postneonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey, Ethiopia 2005

Years preceding the survey	Neonatal mortality (NN)	Postneonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
0-4	39	38	77	50	123
5-9	42	42	83	63	141
10-14	46	49	95	77	165

[1] Computed as the difference between the infant and neonatal mortality rates

Overall, an initial review of the 2005 EDHS mortality data support a conclusion that there was a very substantial decline in under-five mortality in Ethiopia over the five-year period between the 2000 EDHS and the 2005 EDHS. Nevertheless, data from the 2000 EDHS showed evidence of underreporting of deaths, especially in the most recent period, age displacement, and significant heaping on age at death (with deaths at 12 months or 1 year being reported more frequently than deaths at other ages). Thus, declines in under-five mortality have to be interpreted with caution because although the 2005 estimates indicate a decline in mortality, further investigation of the data quality is necessary to verify if there is a real decline in mortality in recent years, or an underestimation in mortality, or perhaps a combination of both. However, a thorough investigation of the 2005 EDHS mortality data is beyond the scope of this report.

Childhood Illnesses

Acute respiratory illness (ARI) and dehydration from severe diarrhea are major causes of childhood mortality. Prompt medical attention for children experiencing symptoms of these illnesses is, therefore, crucial in reducing child deaths. To obtain information on how childhood illnesses are treated, mothers were asked (for each child under five years) whether in the two weeks before the survey the child had experienced cough with short, rapid breathing (symptoms of ARI), fever, and diarrhea.

Data from the 2005 EDHS show that 13 percent of children under five had symptoms of ARI, 19 percent had fever and 18 percent had diarrhea in the two weeks preceding the survey (data not shown). Table 8 shows that 17 percent of children with symptoms of ARI or fever were taken to a health facility or provider. Children under age two, male children, children living in urban areas, children living in Addis Ababa, and children of mothers with at least some secondary education are more likely than other children to be taken to a facility or provider for treatment.

The administration of oral rehydration therapy (ORT) is a simple means of counteracting the effect of dehydration. During ORT, the child is given a solution either prepared by mixing water with the powder in a commercially prepared oral rehydration packet (ORS), a homemade sugar salt solution or other homemade fluid, or by simply increasing the amount of fluids given to children. In the 2005 EDHS, mothers were asked whether children under five had diarrhea in the two weeks preceding the survey. For children with diarrhea, mothers were asked what had been done to treat the diarrhea.

Table 8 shows treatment practices for children who had diarrhea in the two weeks preceding the survey. One in five (22 percent) children with diarrhea was taken to a facility or provider. The data indicate, however, that treatment at home is much more common. Twenty percent of children were given solution prepared from an ORS packet and 37 percent were given ORT.

There are significant regional differentials in treatment practices. Children of mothers with no education are less likely to have been given some form of ORT than children of mothers with some secondary education (34 percent and 73 percent, respectively). Older children are also more likely than younger children to receive ORT.

Table 8. Treatment for acute respiratory infection, fever, and diarrhea

Among children under five years who were sick with a cough accompanied by short, rapid breathing (symptoms of acute respiratory infection - ARI) or fever in the two weeks preceding the survey, percentage for whom treatment was sought from a health facility or provider, and among children under five years who were sick with diarrhea during the two weeks preceding the survey, percentage for whom treatment was sought from a health facility or provider, percentage given a solution made from oral rehydration salt (ORS) packets, and percentage given any oral rehydration therapy (ORT) by background characteristics, Ethiopia 2005

	Children with symptoms of ARI or with fever		Children with diarrhea			
Background characteristic	Percentage for whom treatment was sought from a health facility/ provider[1]	Number with ARI/ fever	Percentage for whom treatment was sought from a health facility/ provider[1]	Percentage given solution from ORS packet	Percentage given any ORT[2]	Number with diarrhea
Age in months						
<6	18.4	264	15.9	5.1	19.2	160
6-11	20.2	347	17.9	17.3	37.7	314
12-23	18.3	514	26.5	27.5	40.1	531
24-35	16.6	477	20.3	18.6	34.9	350
36-47	16.9	402	22.1	20.4	39.1	261
48-59	12.6	313	26.5	17.4	43.5	202
Sex						
Male	19.0	1,149	24.8	21.4	38.5	920
Female	15.5	1,169	19.6	18.4	35.6	898
Residence						
Urban	41.7	140	35.0	45.7	59.2	91
Rural	15.7	2,177	21.6	18.6	35.9	1,727
Region						
Tigray	10.0	157	18.8	21.1	53.5	84
Affar	11.5	17	9.2	8.8	40.2	13
Amhara	12.0	406	27.1	19.9	32.9	337
Oromiya	19.9	975	23.5	22.6	40.4	709
Somali	4.0	66	8.5	15.8	40.7	53
Benishangul-Gumuz	18.8	18	29.6	24.9	40.8	20
SNNP	18.2	638	18.6	15.9	31.0	571
Gambela	28.0	6	40.2	27.6	41.7	4
Harari	25.1	3	31.3	22.6	57.3	4
Addis Ababa	49.0	26	44.6	45.3	70.9	19
Dire Dawa	28.1	4	25.7	31.3	45.5	4
Education						
No education	13.3	1,794	18.9	17.0	33.7	1,443
Primary	27.7	442	33.6	28.4	46.9	332
Secondary and higher	48.2	82	44.6	51.6	73.0	44
Total	17.3	2,318	22.2	19.9	37.1	1,819

[1] Excludes pharmacy, shop, and traditional practitioner
[2] Includes ORS, recommended home fluid, or increased fluids

H. Malaria

Malaria is a public health concern in Ethiopia, especially among pregnant women and children under the age of five. The use of mosquito nets, particularly insecticide-treated nets (ITN), is a primary health intervention to reduce malaria transmission.

Generally there is lesser risk of malaria at altitudes of 1,500 meters (4,500 feet) or higher. Table 9 shows selected malaria indicators for the country as a whole and for those areas that are at altitudes lesser than 1,500 meters. From a programmatic point of view interventions are more critical in the latter areas and as such the following discussion focuses on these areas.

Although one-fifth (20 percent) of Ethiopian households, located at altitudes less than 1,500 meters, report owning a mosquito net, only half of them (10 percent) own an ITN. Just four percent of children under age 5 and one percent of pregnant women slept under an ITN the night before the survey.

Pregnant women who carry the malaria parasite may be at risk of serious problems that jeopardize their own health, that compromise the health of the fetus, and that increase the likelihood of adverse pregnancy outcomes such as stillbirth, spontaneous abortion, and low birth weight. As a protective measure, the World Health Organization recommends that pregnant women receive Intermittent Preventive Treatment (IPT) using two doses of sulfadoxine-pyrimethamine (SP) during the second and early in the third trimester of pregnancy. In Ethiopia, while 11 percent of pregnant women took some type of antimalarial drug for treatment during pregnancy less than one percent received IPT during an antenatal visit for their last live birth.

Since the major manifestation of malaria is fever, mothers were asked whether their children under age five had had a fever in the two weeks preceding the survey. If reported, the mother was asked if the child was given any drugs.

Among children who had fever in the two weeks preceding the survey and who were living in low-altitude areas, 6 percent took an antimalarial drug. Overall, less than 2 percent of sick children received the antimalarial the same day as the onset of symptoms or the next day.

Table 9. Malaria indicators

Possession and use of mosquito nets, malaria treatment during pregnancy, and treatment of children with fever, by residence, Ethiopia 2005

Indicator	Residence (all altitudes)			Residence (altitude less than 1,500 meters)
	Urban	Rural	Total	
Mosquito net				
Percentage of households with at least one mosquito net	10.8	4.8	5.7	19.7
Percentage of households with at least one Insecticide Treated Net (ITN)[1]	4.9	3.0	3.3	10.1
Percentage of children under 5 who slept under a mosquito net the night before of the survey	7.3	1.6	2.0	5.9
Percentage of children under 5 who slept under an Insecticide Treated Net (ITN)[1] the night before the survey	2.8	1.2	1.3	3.6
Percentage of pregnant women age 15-49 who slept under a mosquito net the night before the survey	(10.0)	1.9	2.2	4.1
Percentage of pregnant women age 15-49 who slept under an Insecticide Treated Net (ITN)[1] the night before the survey	(0.2)	1.3	1.2	1.3
Malaria treatment during pregnancy				
Percentage of last births in the 5 years preceding the survey for which the mother took antimalarial drugs for prevention during the pregnancy	5.6	4.9	4.9	12.2
Percentage of last births in the 5 years preceding the survey for which the mother got Intermittent Preventive Treatment (IPT)[2] during an antenatal visit	0.3	0.3	0.3	0.6
Treatment of fever				
Among children under age 5 with fever in the two weeks preceding the survey, percentage who took antimalarial drugs	4.3	2.9	3.0	5.6
Among children under age 5 with fever in the two weeks preceding the survey, percentage who took antimalarial drugs the same day/next day after developing fever	1.6	0.6	0.7	1.6
Number of households	1,974	11,747	13,721	1,012
Number of children under five years of age	780	9,911	10,691	879
No. of pregnant women age 15-49	23	549	572	49
Number of last births in the five years preceding the survey	323	3,998	4,321	315
Number of living children under age five years with fever in the two weeks preceding the survey	117	1,769	1,886	170

Note: Figures in parentheses are based on 25-49 unweighted cases.

[1] An Insecticide Treated Net (ITN) is a permanent net that does not require any treatment, a pretreated net obtained within the last 12 months or a net that has been soaked with insecticide within the past 12 months.

[2] Intermittent Preventive Treatment is preventive treatment with at least two doses of SP/Fansidar during antenatal visit.

I. Nutrition

Breastfeeding

Breast milk is the optimal source of nutrients for infants. Children who are exclusively breastfed receive only breast milk. Exclusive breastfeeding is recommended during the first 6 months of a child's life because it limits exposure to diseases as well as provides all of the nutrients that a baby requires.

Table 10 shows that exclusive breastfeeding is a common practice in Ethiopia. Two-thirds (67 percent) of children less than two months of age, are exclusively breastfed. However, data from the 2000 EDHS show that there has been a decrease in the percentage of children under 2 months exclusively breastfed from five years ago when it was 78 percent. This could partially be explained by the fact that the 2005 EDHS questions on feeding practices made finer distinctions than the 2000 EDHS questions in the type of solid and liquid foods that children were fed and may have resulted in more mothers recognizing the various types of food fed to children, thereby reducing the percentage exclusively breastfed and increasing the percentage receiving complementary food at very young ages. Bottle-feeding is common in Ethiopia.

Table 10. Breastfeeding status by age

Percent distribution of youngest children under three years living with the mother by breastfeeding status and percentage of children under three years using a bottle with a nipple, according to age in months, Ethiopia 2005

			Breastfeeding and consuming:							
Age in months	Not breast-feeding	Exclusively breastfed	Plain water only	Water-based liquids/ juice	Other milk	Comple-mentary food	Total	Number of children	Percentage using a bottle with a nipple[1]	Number of children
<2	1.6	67.3	9.9	5.0	10.6	5.6	100.0	328	7.6	331
2-3	1.2	49.4	14.4	7.0	15.1	12.9	100.0	458	13.2	461
4-5	1.3	31.6	18.7	3.2	23.8	21.5	100.0	355	17.9	360
6-7	2.0	18.1	10.1	4.4	20.4	44.9	100.0	409	16.2	413
8-9	3.0	6.9	6.6	4.7	14.4	64.5	100.0	382	18.7	391
10-11	5.2	2.0	6.1	1.3	6.9	78.5	100.0	266	19.6	267
12-15	7.4	2.8	3.2	1.2	3.1	82.3	100.0	774	12.0	786
16-19	6.2	0.6	3.0	0.5	2.6	87.1	100.0	604	8.7	628
20-23	14.2	0.8	0.9	1.2	1.3	81.6	100.0	431	7.3	463
24-27	30.5	0.3	0.5	0.9	0.8	67.0	100.0	603	9.9	746
28-31	44.0	0.1	0.8	0.1	0.5	54.5	100.0	460	7.2	610
32-35	45.9	0.0	0.5	0.3	0.1	53.2	100.0	380	5.0	536
<6	1.3	49.0	14.5	5.2	16.5	13.5	100.0	1,142	13.0	1,152
6-9	2.5	12.7	8.4	4.5	17.5	54.4	100.0	791	17.4	804

Note: Breastfeeding status refers to a "24-hour" period (yesterday and last night). Children classified as breastfeeding and consuming plain water only consume no supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, water-based liquids/juice, other milk, and complementary foods (solids and semi-solids) are hierarchical and mutually exclusive, and their percentages add to 100 percent. Thus children who receive breast milk and water-based liquids and who do not receive complementary foods are classified in the water-based liquid category even though they may also get plain water. Any children who get complementary food are classified in that category as long as they are breastfeeding as well.

[1]Based on all children under three years

Nutritional Status of Children

Undernutrition places children at increased risk of morbidity and mortality and has also been shown to be related to impaired mental development. Anthropometry provides one of the most important indicators of children's nutritional status. Height and weight measurements were obtained for all children born in the five years before the 2005 EDHS. The height and weight data are used to compute three summary indices of nutritional status: height-for-age; weight-for-height; and weight-for-age. These three indices are expressed as standard deviation units from the median for the international reference population recommended by the World Health Organization. Children who fall more than two standard deviations (-2 SD) below the reference median are regarded as undernourished, while those who fall more than three standard deviations (-3 SD) below the reference median are considered severely undernourished. Table 11 shows the nutritional status among children under five years of age by selected background characteristics.

Children whose height-for-age is below minus two standard deviations from the median of the reference population are considered stunted or short for their age. Stunting is the outcome of failure to receive adequate nutrition over an extended period and is also affected by recurrent or chronic illness. Forty-seven percent of children under five are short for their age; of those children, approximately half (24 percent of all children) are severely stunted.

Children whose weight-for-height is below minus two standard deviations from the median of the reference population are considered wasted or thin. Wasting represents the failure to receive adequate nutrition in the period immediately before the survey, and typically is the result of recent illness episodes, especially diarrhea, or of a rapid deterioration in food supplies. In Ethiopia, 11 percent of children were wasted at the time of the survey.

Children whose weight-for-age is below minus two standard deviations from the median of the reference population are considered underweight. The measure reflects the effects of both acute and chronic undernutrition. Approximately two in five children (38 percent) are underweight.

Nutritional statistics vary by background characteristics. Especially striking are differences by place of residence and mother's education. For example, rural children are almost twice as likely to be nutritionally disadvantaged in terms of all three measures as urban children. Similarly, about one in two children living in the Somali and Amhara regions are underweight compared to about one in ten children residing in Addis Ababa. Children whose mothers have no education are three times more likely to be underweight than children of mothers with at least some secondary education. The impact of weaning can be seen in younger children: the nutritional status of children deteriorates after 6 months of age, when children are usually given complementary foods (see Table 10).

The nutritional status of children has improved over the last five years (Figure 3). Forty-seven percent of children under five were underweight in 2000 compared to 38 percent of children in 2005. Similarly, 52 percent of children were stunted in 2000 compared to 47 percent in 2005. However, there has been no change over the last five years in the percentage of children under five who are wasted.

Table 11. Nutritional status of children

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Ethiopia 2005

Background characteristic	Height-for-age		Weight-for-height		Weight-for-age		Number of children
	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage below -3 SD	Percentage below -2 SD[1]	
Age in months							
<6	1.3	8.1	1.0	6.4	0.0	4.4	389
6-11	7.8	29.4	1.2	12.1	9.0	28.0	454
12-23	23.5	52.3	3.7	17.9	14.9	47.8	836
24-35	27.7	51.3	1.7	9.0	12.7	42.2	901
36-47	30.5	52.5	2.4	8.5	13.2	40.9	1,016
48-59	31.3	54.1	2.4	8.5	9.5	42.6	989
Sex							
Male	24.1	47.2	2.8	11.4	11.5	38.9	2,317
Female	24.2	45.8	1.7	9.6	10.7	37.9	2,269
Residence							
Urban	10.2	29.8	2.5	6.3	4.8	22.9	362
Rural	25.3	47.9	2.2	10.9	11.6	39.7	4,224
Region							
Tigray	16.7	41.0	1.9	11.6	11.3	41.9	316
Affar	21.6	40.8	2.9	9.9	12.9	34.1	46
Amhara	26.5	56.6	3.0	14.2	15.0	48.9	973
Oromiya	21.8	41.0	2.4	9.6	8.2	34.4	1,867
Somali	30.3	45.2	5.1	23.7	17.8	50.9	177
Benishangul-Gumuz	19.7	39.7	3.9	16.0	15.4	44.6	46
SNNP	29.1	51.6	0.9	6.5	11.9	34.7	1,057
Gambela	12.6	29.3	3.8	6.8	4.1	26.7	11
Harari	17.0	38.7	0.0	9.1	5.8	26.7	10
Addis Ababa	5.4	18.4	0.0	1.7	1.5	11.0	67
Dire Dawa	13.8	30.8	4.4	11.4	8.4	29.6	16
Education[2]							
No education	26.3	49.1	2.3	11.2	12.3	41.4	3,450
Primary	17.9	39.8	1.7	10.1	7.6	32.0	754
Secondary and higher	4.7	24.0	0.0	1.3	2.6	13.6	204
Mother's age							
15-19	18.6	38.4	0.2	6.7	7.6	30.0	204
20-24	19.9	41.3	2.6	12.2	11.2	37.8	835
25-29	22.6	45.9	1.5	9.7	9.2	36.2	1,233
30-34	26.0	48.5	1.9	10.9	13.5	40.2	919
35-49	27.1	49.9	2.9	10.6	11.5	41.5	1,217
Mother's status							
Mother interviewed	23.8	46.4	2.1	10.5	11.0	38.5	4,296
Mother not interviewed, but in household	26.3	43.8	1.8	11.1	13.9	38.5	112
Mother not interviewed, not in household[3]	30.6	51.3	5.3	9.7	12.3	35.7	178
Total	24.1	46.5	2.2	10.5	11.1	38.4	4,586

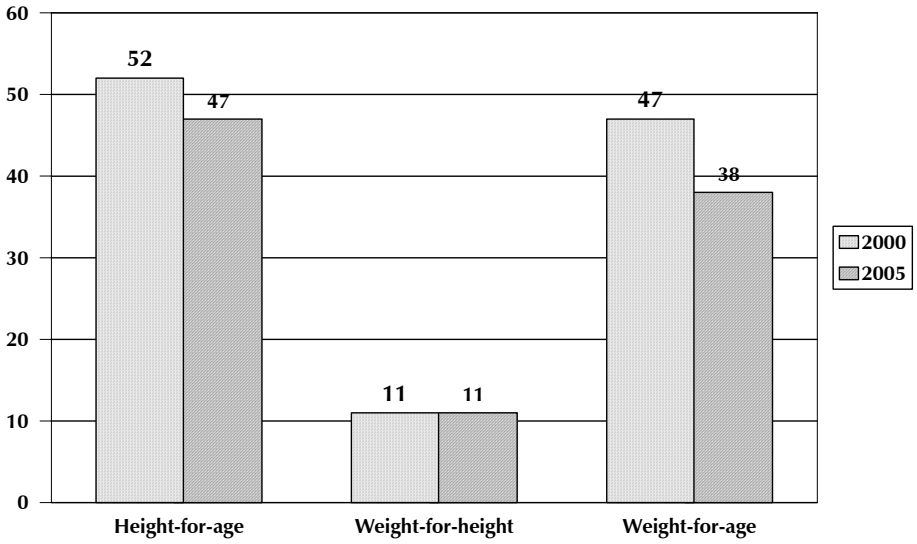
Note: Table is based on children who stayed in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the NCHS/CDC/WHO International Reference Population. The percentage of children who are more than three or more than two standard deviations below the median of the International Reference Population (-3 SD and -2 SD) are shown by background characteristics. Table is based on children who have a valid date of birth (month and year) and valid height and weight measurements.

[1]Includes children who are below -3 SD

[2]For women who were not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers were not listed in the household schedule

[3]Includes children whose mothers are deceased

Figure 3 Nutritional Status of Children Under Age 5, 2000 and 2005



Anemia

Anemia is a major problem in Ethiopia, especially among young children and pregnant women. Causes of anemia are malaria—which is endemic in some parts of the country—as well as dietary deficiencies and parasitic infections. Determining anemia levels among women and their children was an important component of the 2005 EDHS because little was known about the prevalence of anemia among the general population.

Anemia levels were determined by measuring the level of hemoglobin in the blood, a decreased concentration of which characterizes anemia. For hemoglobin measurement, capillary blood was taken from the finger using a sterile, single-use lancet that allows a relatively painless puncture. The concentration of hemoglobin in the blood was measured in the field using the HemoCue system. Selected interviewers were specially trained for this procedure. Prior to participating in the study, each respondent was informed of her right not to participate in the anemia testing and was asked for her permission for the collection of a blood droplet from herself and her children. Levels of anemia were classified as severe, moderate, or mild according to criteria developed by the World Health Organization (DeMaeyer et al., 1989).

Table 12 presents anemia levels for children under five years of age and for women. Anemia is common among children in Ethiopia; more than half are anemic. The majority of children who suffer from anemia are classified as having mild or moderate anemia (21 and 28 percent, respectively) while 4 percent are severely anemic. Anemia is less common among women; 27 percent show any evidence of anemia, and the majority of women are mildly anemic. The prevalence of anemia among both children and women varies by residence. Among children, anemia is especially prevalent in the Somali Region where 86 percent of children have some degree of anemia. Among women the disparity is less striking but is more common in Gambela, Affar and Somali.

Table 12. Anemia among children and women

Percentage of children age 6-59 months and women age 15-49 years classified as having iron-deficiency anemia, by background characteristics, Ethiopia 2005

Background characteristic	Any anemia	Percentage with anemia: Mild anemia	Moderate anemia	Severe anemia	Number
		CHILDREN			
Residence					
Urban	46.8	18.4	24.8	3.5	270
Rural	54.0	21.6	28.5	3.9	3,868
Region					
Tigray	56.5	23.9	28.8	3.8	288
Affar	58.5	25.3	28.8	4.4	32
Amhara	52.0	20.0	26.6	5.4	858
Oromiya	56.0	22.3	30.2	3.5	1,717
Somali	85.6	19.7	51.7	14.1	124
Benishangul-Gumuz	54.3	24.6	25.2	4.4	39
SNNP	46.2	20.7	23.5	2.0	1,004
Gambela	61.8	25.3	32.5	4.0	10
Harari	56.1	23.6	29.3	3.1	7
Addis Ababa	37.5	9.6	23.9	4.0	45
Dire Dawa	60.7	20.0	29.1	11.5	14
Total	53.5	21.4	28.3	3.9	4,138
		WOMEN			
Residence					
Urban	17.9	13.5	3.7	0.7	948
Rural	28.1	18.0	8.6	1.4	5,193
Region					
Tigray	29.3	22.4	6.3	0.6	411
Affar	41.0	26.7	10.9	3.4	55
Amhara	30.9	21.2	8.1	1.5	1,486
Oromiya	24.8	15.6	8.0	1.2	2,177
Somali	39.8	20.1	14.9	4.8	181
Benishangul-Gumuz	31.5	20.9	9.9	0.8	59
SNNP	23.3	14.6	7.7	1.0	1,437
Gambela	42.0	29.4	10.8	1.7	21
Harari	21.8	14.6	6.7	0.5	16
Addis Ababa	15.0	11.1	3.1	0.8	271
Dire Dawa	25.5	17.6	5.4	2.5	26
Total	26.5	17.3	7.9	1.3	6,141

Note: Table is based on children and women who stayed in the household the night before the interview. Prevalence is adjusted for altitude (for children and women) using CDC formulas (CDC, 1989). Women and children with <7.0 g/dl of hemoglobin have severe anemia, women and children with 7.0-9.9 g/dl have moderate anemia, and non-pregnant women with 10.0-11.9 g/dl and children and pregnant women with 10.0-10.9 g/dl have mild anemia.

J. Female Genital Cutting

The 2005 EDHS included questions on the practice of female genital cutting. As Table 13 shows that the practice of female circumcision is widespread in Ethiopia. Three in four women (74 percent) have been circumcised. However, there has been a decline in the practice in more recent years, as seen by the lower percentage of women in the younger age groups circumcised compared with older age groups. For example, 62 percent of women age 15-19 have been circumcised compared with more than 80 percent of women age 35 and above. Comparable data collected in the 2000 EDHS suggests that the practice has declined from 80 percent among women age 15-49 to 74 percent five years later.

Not surprisingly, prevalence is higher in rural than urban areas, and among women with little or no education compared with those with at least secondary education. Regional variation is marked with women living in the Tigray Region least likely to be circumcised (29 percent) and women living in the Somali Region most likely (97 percent).

Over the last five years there has been declining support for the practice. Sixty percent of women supported the practice in 2000 compared with 29 percent in 2005.

Table 13. Prevalence of female circumcision

Percentage of women who have been circumcised and the percentage who support continuation of the practice of female circumcision, by background characteristics, Ethiopia 2005

Background characteristic	Percentage of women circumcised	Percentage who support the practice	Number
Age			
15-19	62.1	20.6	3,266
20-24	73.0	25.2	2,547
25-29	77.6	31.7	2,517
30-34	78.0	33.3	1,808
35-39	81.2	35.1	1,602
40-44	81.6	31.8	1,187
45-49	80.8	35.0	1,143
Residence			
Urban	68.5	10.2	2,499
Rural	75.5	32.8	11,571
Region			
Tigray	29.3	17.9	919
Affar	91.6	64.5	146
Amhara	68.5	34.7	3,482
Oromiya	87.2	29.0	5,010
Somali	97.3	72.9	486
Benishangul-Gumuz	67.6	31.9	124
SNNP	71.0	22.6	2,995
Gambela	27.1	9.4	44
Harari	85.1	21.5	39
Addis Ababa	65.7	5.6	756
Dire Dawa	92.3	13.8	69
Education			
No education	77.3	36.5	9,271
Primary	70.8	19.0	3,123
Secondary and higher	64.0	4.6	1,675
Total	74.3	28.8	14,070

K. Obstetric Fistula

The 2005 EDHS included a series of questions on obstetric fistula, a condition that develops when blood supply to the tissues of the vagina, bladder and/or rectum is cut off during prolonged obstructed labor, resulting in the formation of an opening through which urine and/or feces pass uncontrollably. Women who develop fistulas are often socially rejected.

All women were asked if they had heard of obstetric fistula, and if they had whether they themselves had experienced the condition. Those who reported suffering from obstetric fistula were asked if they had ever been treated for it. In addition, these women were asked if there were any other women in the household who suffered from it and if so the number. One percent of interviewed Ethiopian women who have ever had a birth reported experiencing obstetric fistula (Table 14). Older women (age 40 and above) and very young women (age 15-19) are slightly more likely to report the condition, as are women residing in urban areas. Women residing in the Tigray and SNNP regions are also relatively more likely to have experienced obstetric fistula.

Table 14. Prevalence of obstetric fistula

Percentage of women who have ever given birth who have experienced obstetric fistula, by background characteristics, Ethiopia 2005

Background characteristic	Percentage experienced obstetric fistula	Number
Age		
15-19	2.0	443
20-24	0.9	1,533
25-29	0.6	2,190
30-34	0.6	1,698
35-39	1.1	1,559
40-44	1.6	1,154
45-49	1.9	1,125
Residence		
Urban	1.4	1,228
Rural	1.0	8,474
Region		
Tigray	1.6	634
Affar	1.0	105
Amhara	0.5	2,562
Oromiya	1.2	3,467
Somali	0.0	381
Benishangul-Gumuz	0.6	94
SNNP	1.5	2,054
Gambela	1.1	33
Harari	0.1	23
Addis Ababa	1.0	307
Dire Dawa	1.0	42
Education		
No education	1.0	7,635
Primary	1.3	1,453
Secondary and higher	1.0	614
Total	1.0	9,703

L. HIV/AIDS

The HIV/AIDS epidemic is a serious threat to Ethiopia's social and economic development. The 2005 EDHS included a series of questions that addressed respondents' knowledge about AIDS and their awareness of modes of transmission of the Human Immunodeficiency Virus that causes AIDS, and of behaviors that can prevent the spread of HIV.

Table 15 shows that 90 percent of women 15-49 and 97 percent of men 15-59 say that they have heard of AIDS. However, a relatively lower percentage of women and men believe that there is a way to avoid HIV/AIDS (81 percent and 93 percent, respectively). There are substantial differences in knowledge of HIV/AIDS by place of residence. Women and men living in rural areas of the country are less likely to have knowledge of HIV/AIDS with the difference much more obvious among women than men. Respondents living in the Somali Region express least knowledge, with half of women and two-thirds of men having heard of AIDS, and one in three women and about one in two men believing that there is a way to avoid HIV/AIDS.

Table 15. Knowledge of AIDS

Percentage of women and men who have heard of AIDS and believe there is a way to avoid HIV/AIDS, by background characteristics, Ethiopia 2005

Background characteristic	Women			Men		
	Has heard of AIDS	Believes there is a way to avoid HIV/AIDS	Number	Has heard of AIDS	Believes there is a way to avoid HIV/AIDS	Number
Age						
15-19	89.2	83.0	3,266	94.0	90.7	1,335
20-24	91.5	84.4	2,547	97.1	93.9	1,064
25-29	89.1	79.7	2,517	96.9	94.8	741
30-39	89.4	78.8	3,410	98.2	95.6	1,405
40-49	90.4	80.6	2,330	96.6	92.4	919
50-59	na	na	na	97.2	91.5	569
Marital status						
Never married	91.1	86.9	3,516	95.0	91.7	2,419
Married or living together	89.1	78.8	9,066	97.5	94.4	3,424
Divorced/separated/widowed	91.4	82.7	1,488	98.7	92.7	190
Residence						
Urban	98.6	96.6	2,499	99.7	98.9	916
Rural	88.0	77.9	11,571	96.0	92.2	5,117
Region						
Tigray	97.0	86.5	919	99.7	98.9	366
Affar	85.4	58.0	146	95.8	90.7	65
Amhara	87.9	78.9	3,482	96.5	94.7	1,521
Oromiya	94.7	86.8	5,010	98.4	95.3	2,222
Somali	50.0	32.6	486	66.2	45.2	202
Benishangul-Gumuz	67.7	58.7	124	94.6	89.6	54
SNNP	87.3	78.6	2,995	97.0	93.3	1,244
Gambela	62.9	54.1	44	87.4	79.7	21
Harari	98.2	92.0	39	99.5	98.6	16
Addis Ababa	99.2	98.3	756	99.4	98.4	292
Dire Dawa	96.9	91.2	69	97.5	95.5	30
Education						
No education	86.1	74.6	9,271	93.1	87.5	2,589
Primary	95.6	91.1	3,123	98.8	96.5	2,252
Secondary and higher	99.8	99.6	1,675	99.9	99.6	1,192
Total	89.9	81.2	14,070	96.6	93.3	6,033

na = Not applicable

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